

**CLAIMS:** I claim as the subject of my invention:

5. (PREVIOUSLY PRESENTED) A conductive metallic soil penetrating electrode for use in making an electrical connection with soil for the purpose of measuring soil electrical parameters, which has a long, small angle conical part that permits totally intimate electrical contact with the soil as the electrode is driven in.
6. (PREVIOUSLY PRESENTED) A conductive metallic soil penetrating electrode for use in making an electrical connection with soil for the purpose of measuring soil electrical parameters, which has a long, small angle conical part that permits totally intimate electrical contact with the soil, and which has a shaft that is undercut from the major diameter of the conical part forming a shoulder, said undercut preventing any additional electrode contact area with the soil should the electrode be driven deeper than the length of said conical part.
7. (PREVIOUSLY PRESENTED) A conductive metallic soil penetrating electrode described in Claim 6 with a shaft formed by an undercut section at the major diameter of the conical part, said undercut forming a shoulder that can be used as a gauge showing when the electrode has been driven to the correct depth in the soil.